

Title (en)
LUBRICANT COMPOSITION

Title (de)
SCHMIERMITTELZUSAMMENSETZUNG

Title (fr)
COMPOSITION LUBRIFIANTE

Publication
EP 2891703 A4 20150909 (EN)

Application
EP 13832967 A 20130823

Priority
• JP 2012190028 A 20120830
• JP 2013072593 W 20130823

Abstract (en)
[origin: EP2891703A1] The present invention provides a lubricating oil composition comprising a lubricating base oil, and at least one ester additive selected from a first ester that is a fatty acid 3,4-epoxycyclohexyl alkyl ester and a second ester that is a 3,4-epoxycyclohexyl carboxylic acid alkyl ester, wherein a content of the ester additive is 0.01 to 5.0% by mass based on the total mass of the lubricating oil composition.

IPC 8 full level
C10M 169/04 (2006.01); **C09K 5/04** (2006.01); **C10M 101/02** (2006.01); **C10M 101/04** (2006.01); **C10M 105/18** (2006.01); **C10M 105/32** (2006.01); **C10M 105/38** (2006.01); **C10M 107/24** (2006.01); **C10M 107/34** (2006.01); **C10M 129/18** (2006.01); **C10M 129/70** (2006.01); **C10N 20/02** (2006.01); **C10N 30/10** (2006.01); **C10N 40/30** (2006.01)

CPC (source: EP KR US)
C09K 5/04 (2013.01 - EP KR US); **C10M 101/02** (2013.01 - KR); **C10M 101/04** (2013.01 - KR); **C10M 105/18** (2013.01 - KR); **C10M 105/38** (2013.01 - KR); **C10M 107/24** (2013.01 - KR); **C10M 107/34** (2013.01 - KR); **C10M 129/18** (2013.01 - KR); **C10M 129/66** (2013.01 - EP US); **C10M 129/70** (2013.01 - KR US); **C10M 169/04** (2013.01 - KR); **C10M 171/008** (2013.01 - EP US); **C10M 2203/1006** (2013.01 - EP US); **C10M 2203/1025** (2013.01 - EP US); **C10M 2207/042** (2013.01 - EP US); **C10M 2207/24** (2013.01 - EP US); **C10M 2207/281** (2013.01 - EP US); **C10M 2207/2825** (2013.01 - EP US); **C10M 2207/2835** (2013.01 - EP US); **C10M 2207/401** (2013.01 - EP US); **C10M 2209/043** (2013.01 - EP US); **C10M 2209/1033** (2013.01 - EP US); **C10M 2209/1055** (2013.01 - EP US); **C10N 2020/011** (2020.05 - EP US); **C10N 2020/02** (2013.01 - EP US); **C10N 2020/071** (2020.05 - EP US); **C10N 2020/101** (2020.05 - EP US); **C10N 2030/02** (2013.01 - EP US); **C10N 2030/08** (2013.01 - EP US); **C10N 2040/02** (2013.01 - EP US); **C10N 2040/04** (2013.01 - EP US); **C10N 2040/25** (2013.01 - EP US); **C10N 2040/30** (2013.01 - EP US)

Citation (search report)
• [Y] US 2007032391 A1 20070208 - TAGAWA KAZUO [JP], et al
• [Y] EP 2471896 A1 20120704 - JX NIPPON OIL & ENERGY CORP [JP]
• [Y] EP 2039746 A1 20090325 - NIPPON OIL CORP [JP]
• [Y] EP 2243819 A1 20101027 - IDEMITSU KOSAN CO [JP]
• [Y] EP 0537983 A1 19930421 - ASAHI DENKA KOGYO KK [JP]
• [Y] EP 0612835 A2 19940831 - IDEMITSU KOSAN CO [JP]
• See references of WO 2014034568A1

Cited by
CN106350168A

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
EP 2891703 A1 20150708; EP 2891703 A4 20150909; EP 2891703 B1 20190227; CN 104520415 A 20150415; CN 104520415 B 20180601; JP 2014047267 A 20140317; JP 5882860 B2 20160309; KR 101983984 B1 20190530; KR 20150046010 A 20150429; TW 201414828 A 20140416; TW I575065 B 20170321; US 2015252281 A1 20150910; US 9546337 B2 20170117; WO 2014034568 A1 20140306

DOCDB simple family (application)
EP 13832967 A 20130823; CN 201380041992 A 20130823; JP 2012190028 A 20120830; JP 2013072593 W 20130823; KR 20157002247 A 20130823; TW 102130927 A 20130828; US 201314417633 A 20130823